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# A New Species of *Wikstroemia* (Thymelaeaceae) from Hiva Oa, Marquesas Islands

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**ABSTRACT.** A new species, *Wikstroemia johnplewsii*, is described and illustrated. This distinctive species is restricted to upper montane mesic to wet forest on the island of Hiva Oa (Marquesas Islands in French Polynesia); it differs from the only other *Wikstroemia* species in the Marquesas, *W. coriacea*, which occurs widely in Polynesia, by its ovate-elliptic to suborbicular, subsessile leaves and long, 9–27-flowered, racemose inflorescences with an elongate peduncle and inflorescence axis.

In his treatment of *Wikstroemia* Endlicher for the *Flora of Southeastern Polynesia*, Brown (1935: 190–191) recognized but a single species in the Marquesas Islands, the common and widespread Polynesian *W. foetida* (L. f.) A. Gray. He noted the occurrence of two forms: a “short-pedunculate form” widespread and known from four of the Marquesas Islands (Nuku Hiva, Ua Pou, Hiva Oa, and Fatu Hiva), and a “long-pedunculate form” known only from Hiva Oa. Brown, however, did not give formal taxonomic recognition to either of these forms.

Intensive botanical exploration of the Marquesas, which began in the 1970s, has produced numerous new collections, including a distinctive species of *Wikstroemia*, which differs from the above species in its ovate-elliptic to suborbicular, subsessile leaves and long, racemose, 9–27-flowered inflorescence with a long peduncle and inflorescence axis. This new species, described below, obviously corresponds to Brown’s “long-pedunculate form” of *W. foetida*. The widespread Polynesian species by contrast has elliptic, occasionally oblanceolate or ovate, petiolate leaves, short racemose, usually less than 8-flowered inflorescences and with a short or long peduncle, but always a short inflorescence axis.

According to Fosberg (1993: 68), *Wikstroemia coriacea* Seemann is the correct name for the common Polynesian species, long known as *Wikstroemia foetida*, because the type of the basionym, *Daphne foetida* L. f., represents a species of *Ixora* (Rubiaceae) now known as *Ixora foetida* (L. f.) Fosberg. The only other *Wikstroemia* species known from French Polynesia is *W. raiateensis* J. W. Moore (Moore, 1933), a prostrate shrub that has not been collected in the Marquesas Islands.

***Wikstroemia johnplewsii*** W. L. Wagner & Lorence, sp. nov. TYPE: Marquesas Islands. Hiva Oa: trail from Feani to Atuona, 960 m, 13 Feb. 1975, R. L. Oliver & P. A. Schäfer 3162 (holotype, US; isotypes, BISH, K, P, PTBG). Figure 1.

Differt a *Wikstroemia coriacea* inflorescentia longiora racemosa, floribus 9–27, pedunculo 12–32(–40) mm longo, rhachidi (8–)25–40 mm longa.

Shrubs, 0.7–2(–4.5) m tall, many-branched, often divaricately, glabrous throughout, bark on young stems dark reddish brown, becoming increasingly fissured and grayish brown, young twigs conspicuously compressed, costate to narrowly winged. Leaves coriaceous, chartaceous when dry, upper surface glossy green, the lower surface paler green than upper surface and dull, ovate-elliptic to broadly ovate, elliptic or suborbicular, 3.2–8 × 2.5–5.5 cm, those subtending the inflorescence 2.5–7.5 × 2–3.7 cm, apex rounded to short-acuminate, sometimes bluntly so, or occasionally retuse (perhaps by injury), base broadly cuneate to truncate or weakly cordate, petioles 1.5–2 mm long. Inflorescence an elongate raceme, glabrous throughout, the peduncle 12–32(–40) mm long, the flowering axis (8–)20–40 mm long, pedicels ca. 1 mm long in flower, up to 4 mm long in fruit. Flowers

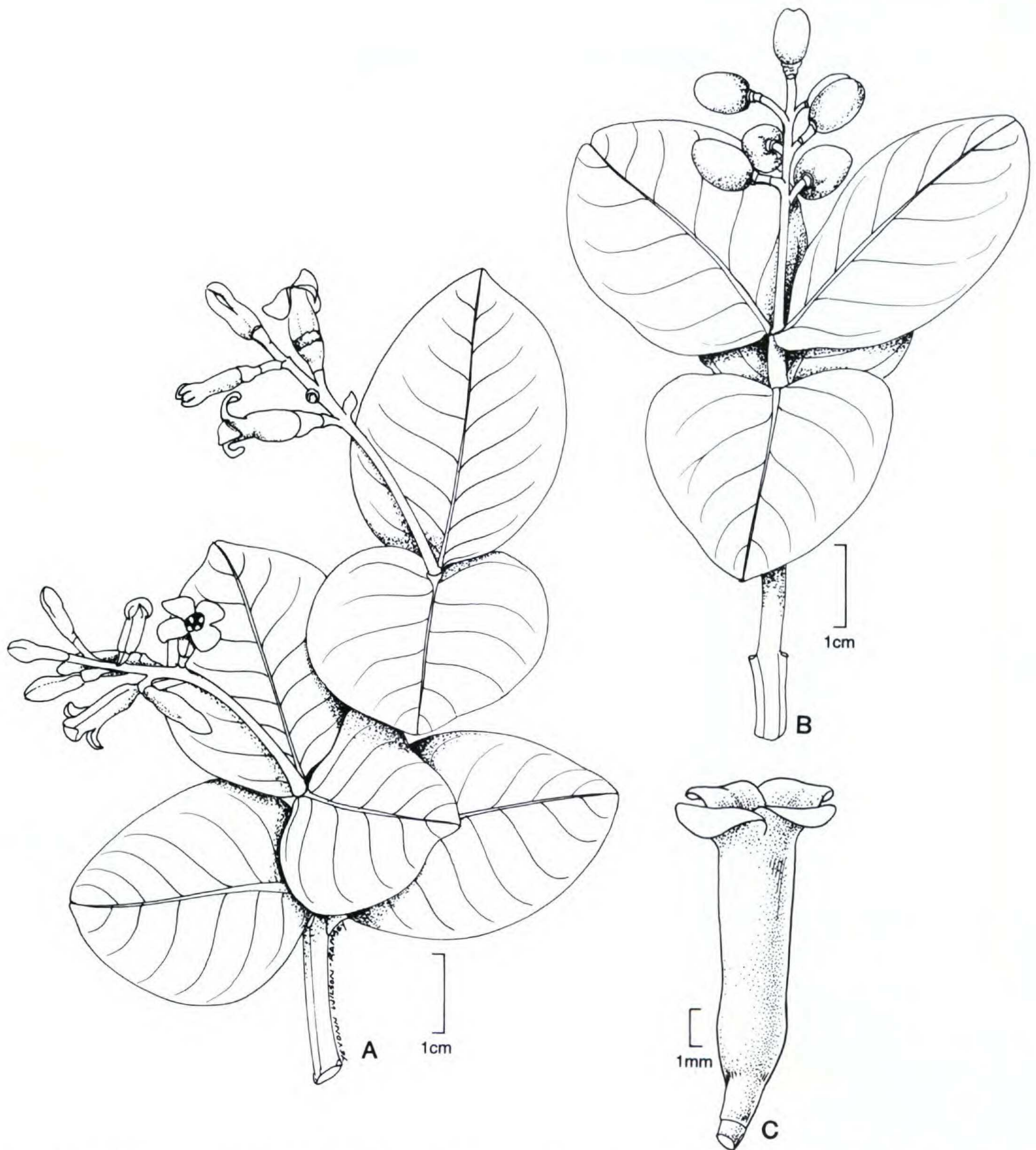


Figure 1. *Wikstroemia johnplewsii* W. L. Wagner & Lorence, drawn primarily from slides taken by W. L. Wagner and from Sachet & Decker 1150. —A. Flowering branch. —B. Fruiting branch. —C. Calyx.

(9–)12–27 or perhaps more, perfect; calyx tubular, greenish yellow, glabrous, slightly tapered toward the base, the tube 7–8 mm long, the lobes dimorphic, the shorter pair ca.  $1.5 \times 1.5$  mm, triangular-ovate, apparently slightly cupped, the longer pair ca.  $2.5\text{--}3 \times 1.5\text{--}3$  mm long, asymmetrically ovate; nectary scales ca. 0.8 mm long, linear, nearly distinct to the base; stamens with the lower whorl included, inserted near midway in the tube, and the upper ones with the anther apex flush with the apex of the calyx tube; anthers ca. 1 mm long; filaments

ca. 0.5 mm long; ovary cylindrical, ca. 1.5–2 mm long, sparsely pilose apically; stigma reddish purple, subcapitate, papillate. Fruit (immature?) 8–9 mm long, ca. 5 mm diam. (when dry), fleshy, ellipsoid-ovoid, greenish orange.

*Distribution, habitat, and ecology.* *Wikstroemia johnplewsii* is endemic to the island of Hiva Oa, Marquesas Islands, occurring in mesic to wet forest, sometimes in grassy woodlands of mostly introduced species, and occasionally near roadcuts, at

elevations from 700 to 1130 m. Commonly associated species are *Metrosideros collina* (J. R. Forster & G. Forster) A. Gray, *Weinmannia parviflora* G. Forster, *Crossostylis biflora* J. R. Forster & G. Forster, *Psychotria*, *Ascarina marquesensis* A. C. Smith, *Freycinetia*, *Hibiscus tiliaceus* L., *Pandanus* sp., *Reynoldsia marchionensis* F. Brown, *Cheirodendron bastardianum* (Decaisne) Frodin, *Lycopodium cernuum* L., *Cyathea*, *Dicranopteris linearis* (Burman f.) Underwood, *Cyrtandra*, and *Scaevola*. When occurring primarily with introduced vegetation it grows with various species of grasses and *Psidium*.

*Paratypes.* MARQUESAS ISLANDS. **Hiva Oa:** road from Atuona to Puamau, just below Mt. Ootua, 625–700 m, 23 Nov. 1974, *Sachet & Decker 1906* (BISH, US), 700 m, 22 Jan. 1975, *Sachet et al. 2132* (US); Mt. Ootua, old trail E of summit, 640 m, 26 Feb. 1975, *Oliver & Schäfer 3217* (BISH, P, PTBG, US); central part, Mt. Ootua, 800 m, 27 July 1977, *Gagné 1167* (BISH, US); chemin d'Atuona à Hanamenu par Feani, pente vers Hanamenu, 1000 m, 12 fév. 1975, *Schäfer 5201* (BISH, PTBG, US); trail to Feani and Hanamenu, ca. 1 mi. above spring and camp, 3700 ft. (1130 m), 30 July 1988, *Perlman 10192* (BISH, F, MO, P, PAP, PTBG, US); trail toward Hanamenu, 3200 ft., 3 Aug. 1988, *Perlman 10199* (AD, BISH, E, F, K, MO, P, PAP, PTBG, US), *Perlman 10202* (BISH, MO, P, PAP, PTBG, US); where trail toward Hanamenu turns into dry ridge, 3000 ft., 3 Aug. 1988, *Perlman 10216* (BISH, MO, P, PAP, PTBG, US); Mont Ootua, bord de l'ancien chemin, à l'est du mont, 730 m, 26 fév. 1975, *Schäfer & Oliver 5254* (US); Mt. Ootua, off road between airport and Puamau, along ridge and summit, 841–865 m, 21 Aug. 1995, *Perlman & Wood 14864* (AD, BISH, MO, P, PAP, PTBG, US); Atuona–Feani Trail, crest of ridge and top of leeward slope, 1200–1300 m, 24–26 Sep. 1963,

*Sachet & Decker 1150* (BISH, PAP, US); mts. NW du Temetiu, crête au SE du campement, N de la haute vallée de Hanamenu, 840 m, 22 oct. 1975, *Schäfer 5909* (US); Vaipahee Falls area, ridge crest, Kaava ridge further toward Feani, 3000 ft., 9 Aug. 1988, *Perlman 10249* (BISH, PTBG, US); Vaina, 700 m, June 1929, *Mumford & Adamson 430* (BISH).

*Etymology.* It gives us great pleasure to name this new species for NTBG trustee John Harry Rice Plews, steadfast supporter of the Garden's research program, who was a major financial contributor to the 1988 Fatu Hiva Expedition to the Marquesas Islands, a collaborative expedition between the National Tropical Botanical Garden, Smithsonian Institution, Bernice P. Bishop Museum, and ORSTOM (Papeete).

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